

Translation

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SFX-PCT-4	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/000619	International filing date (<i>day/month/year</i>) 23 January 2003 (23.01.2003)	Priority date (<i>day/month/year</i>) 23 January 2002 (23.01.2002)
International Patent Classification (IPC) or national classification and IPC B29C 45/00, B29B 17/00, B29K 25/00, 23/00, 21/00		
Applicant SUZUKA FUJI XEROX CO., LTD.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 20 August 2003 (20.08.2003)	Date of completion of this report 19 May 2004 (19.05.2004)
Name and mailing address of the IPEA/JP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP2003/000619

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages 1, 3-30, as originally filed
pages 2, 2/1, filed with the demand
pages _____, filed with the letter of _____
- ☐ the claims:
pages 2, 3, 4, 8, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages 1, 5-7, 9-11, filed with the letter of 21 January 2004 (21.01.2004)
- ☐ the drawings:
pages 1, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig. _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	5-7, 9-11	YES
	Claims	1-4, 8	NO
Inventive step (IS)	Claims	9-11	YES
	Claims	1-8	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

Document 1: JP, 2001-38729, A (Hitachi, Ltd.), 13 February, 2001 (13.02.01) (Family: none)
 Document 2: JP, 2001-323130, A (Toray Industries, Inc.), 20 November, 2001 (20.11.01) (Family: none)
 Document 3: JP, 8-59967, A (Mitsubishi Chemical Corp.), 5 March, 1996 (05.03.96) (Family: none)
 Document 4: JP, 2003-62854, A (Polypastics Co., Ltd.), 5 March, 2003 (05.03.03) (Family: none)
 Document 5: WO, 00-53384, A1 (Suzuka Fuji Xerox Co., Ltd.), 14 September, 2000 (14.09.00), & US, 2002-103267, A1, & EP, 1166985, A1
 Document 6: WO, 97-38838, A1 (Suzuka Fuji Xerox Co., Ltd.), 23 October, 1997 (23.10.97), & EP, 906817, A1

Claims 1-8

Document 1 describes a system for recycling household electric appliances or OA appliances, comprising the steps of (1) collecting molded coating films from molded articles composed of a thermoplastic resin having compatible coating films, (2) grinding them into pieces, (3) adding at least one of a brand new material, compatibilizing agent and modifying agent to the pieces, (4) melting and mixing to form pellets, and (5) molding them. The document also describes that (a) a styrene-ethylene-butadiene-based elastomer or a styrene-butadiene-styrene-based elastomer can be used as the compatibilizing agent, (b) polyethylene resin, polystyrene resin, polybutadiene resin or the like can be used as the thermoplastic resin, (c) gas-assisted molding or foam molding can be performed, and (d) the paint composition is based on a thermoplastic resin compatible with the molded thermoplastic resin article.

So, the subject matters of claims 1-4 and 8 do not appear to be novel or to involve an inventive step, and the subject matter of claim 5 does not appear to involve an inventive step.

Document 2 describes a method for recycling a flame retardant thermoplastic resin composition, comprising the step of adding a fluorine-based resin to a flame retardant thermoplastic resin composition containing a graft copolymer obtained by graft-copolymerizing an aromatic vinyl-based monomer to a rubbery polymer. The document also describes that a flame retardant thermoplastic resin composition is molded under gas assistance.

So, the subject matters of claims 1, 2 and 4 do not appear to be novel or to involve an inventive step.

Document 3 describes (1) a large-sized injection-molded article formed of a composition containing recycled polyethylene terephthalate and glass fibers, and (2) a production method thereof. The document also describes that (a) a rubbery polymer such as a diene-based polymer is mixed, and (b) foam molding is performed.

The mixed amount of the rubbery polymer could have been adjusted, as required.

So, the subject matter of claim 1 does not appear to be novel or to involve an inventive step, and the subject matter of claim 5 does not appear to involve an inventive step.

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of : V

Document 4 describes a method for producing a recycled resin-containing injection-molded article, comprising the step of injection-molding a recycled material-containing material consisting of 10 wt% or more of a recycled material obtained by grinding a used injection-molded foam obtained by (a) impregnating a molten resin with an inert fluid of a supercritical state as a foaming agent and (b) molding the resin, and 90 wt% or less of a new material. The document also describes that (1) the resin constituting the used injection-molded foam can be polyethylene, polypropylene, polystyrene, or the like, and (2) injection foam molding can be used as a method for producing the recycled resin-containing injection-molded article.

So, the subject matters of claims 1-3 do not appear to be novel or to involve an inventive step.

Document 5 describes a method for recycling a molded resin article, comprising the step of adding a thermoplastic rubbery material (1) compatible with the thermoplastic resin contained as a main ingredient of the molded resin article and (2) capable of being mixed with it and molded, as a recycling aid to be added for recovering the physical properties of the recycled material. The document also describes that (1) the resin described in WO, 97-38838 can be used, (2) the rubbery material is obtained by graft-copolymerizing a monomer as an ingredient constituting a thermoplastic resin to a rubber, (3) the rubbery material can be a butadiene-based rubber, olefin-based rubber, acryl-based rubber or the like, and (4) the molding method, coating method and paint described in WO, 97-38838 can be employed.

Document 6 describes a recycling method in which (1) a molded article composed of a thermoplastic resin such as a styrene-based resin or olefin-based resin and (2) a coated and molded article having a coating film composed of a resin such as a diene-based rubber having affinity with the resin of the molded article are used as raw materials to be recycled, and molded, for example, injection-molded under gas assistance, or foam-molded. The document also describes that a recycling aid such as a diene-based rubber can also be mixed.

A person skilled in the art could have easily employed the molding method described in document 6 in the recycling method described in document 5.

So, the subject matters of claims 1-8 do not appear to involve an inventive step.

Claims 9-11

None of the documents cited in the ISR describes that (1) a non-yellowing type cellulose derivative is added to a paint and/or ink, (2) a compatible thermoplastic resin sheet is bonded onto the surface of a molded thermoplastic resin article by means of an adhesive composed of a compatible thermoplastic resin or thermosetting resin, and (3) a molded thermoplastic resin article consists of a main portion and an accessory portion bonded to the main portion by means of an adhesive or welding rod, wherein (a) the said adhesive is composed of a thermoplastic resin or thermosetting resin compatible with the said thermoplastic resin, and (b) the welding rod is composed of a thermoplastic resin compatible with the said thermoplastic resin. This constitution is not considered to be obvious to a person skilled in the art either. So, the subject matters of claims 9-11 appear to be novel and to involve an inventive step.